

REMARKS

Claims 1-2, 5, 10, 16, 42, 45 and 47 have been amended. Claims 3 and 17 have been canceled. Claims 1-2, 4-5, 7, 9-10, 12, 16, 18, 21, 23, 24, 42-45 and 47 remain pending in the application. Applicant reserves the right to pursue the original and other claims in this and other applications.

Claim 12 stands rejected under 35 U.S.C. § 112 ¶2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 has been amended to address the concerns raised in the Office Action with respect to claim 12. Specifically, claim 10, from which claim 12 depends, has been amended to depend from claim 2, which recites a “third circuit.” Accordingly, the rejection should be withdrawn.

Claims 1, 16 and 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,704,050 (“Washkurak”). This rejection is respectfully traversed.

Washkurak does not teach or suggest every element of independent claims 1, 16, and 42. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Claim 1 recites an “imager device, comprising: an array of pixels; and a first circuit electrically coupled to at least one pixel of said array, said first circuit being adapted to output a digital representation of an analog pixel signal based on a difference between a reference signal current and pixel signal current.” According to claim 1, “said first circuit being adapted to calibrate the reference signal current when the reference and pixel signal currents are not equal.” Washkurak does not teach or suggest these limitations.

Washkurak discloses a differential output amplifier 160 that outputs a signal based on the difference between a reference current and a signal current stored in current mirror 130. (Washkurak, col. 4, lns. 53-60; FIG. 3). Washkurak, however, is silent as to “calibrat[ing] the

reference signal current when the reference and pixel signal currents are not equal.” Since Washkurak does not teach or suggest all of the limitations of claim 1, claim 1 is not obvious over the cited reference.

Claim 16 similarly recites “modifying a resistance of said first circuit when the reference and pixel currents are not equal,” and is patentable for at least the same reasons and on its own merits. Claim 42, a method claim, requires a step similar to the limitation recited in claim 1, “calibrating the first current when the first and second currents are not equal,” and is patentable for at least the same reasons and on its own merits. Accordingly, Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

Claims 10, 12, 21, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Washkurak in further view of U.S. Patent No. 6,515,701 (“Clark”). This rejection is respectfully traversed.

As discussed above with respect to claim 1, Washkurak does not teach or suggest “calibrat[ing] the reference signal current when the reference and pixel signal currents are not equal.” Clark does not cure the deficiencies of Washkurak. Clark only discloses a CMOS imager with counters and decoders which generate word/row addresses to select which pixels to read out. (Clark, col. 5, lns. 37-60). Accordingly, the claimed combination does not teach or suggest “calibrat[ing] the reference signal current when the reference and pixel signal currents are not equal,” as recited in claim 1.

Claims 10 and 12 depend from claim 1 and are allowable for at least the same reasons, and on their own merits. As noted above, claim 16 recites a similar limitation to claim 1 and is allowable for the same reasons as claim 1. Claims 21, 23 and 24 depend from claim 16 and are allowable for at least the same reasons, and on their own merits. Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

Claims 43 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Washkurak in further view of U.S. Patent No. 5,229,761 ("Fuse"). This rejection is respectfully traversed.

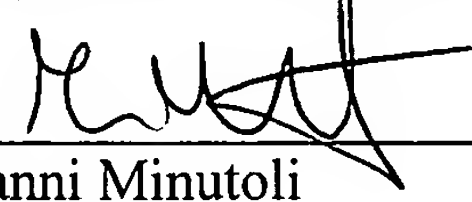
As discussed above with respect to claim 42, Washkurak does not teach or suggest "calibrating the first current when the first and second currents are not equal." Fuse does not cure the deficiencies of Washkurak. Fuse only teaches the use of a variable resistance resistor to obtain different voltage values. (Fuse, col. 2, lns. 1-9). Accordingly, the claimed combination does not disclose, teach or suggest "calibrat[ing] the reference signal current when the reference and pixel signal currents are not equal," as recited in claim 42. Claims 43 and 44 depend from claim 42 and are allowable for at least the same reasons. Accordingly, Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

Claims 2, 4-5, 7, 9, 18, 45 and 47 stand objected to. The Examiner has indicated claims 2, 4-5, 7, 9, 18, 45 and 47 would be allowable if re-written in independent form including all the limitations of the base claim and any intervening claims. Applicant submits that claims 1, 16 and 42 have each been amended with allowable limitations. As described above, because claims 1, 16 and 42 are patentable, claims 2, 4-5, 7, 9, 18, 45 and 47 are in condition for allowance. Applicant respectfully requests that the Examiner's objection to claims 2, 4-5, 7, 9, 18, 45 and 47 be withdrawn and the claims allowed.

In view of the above, Applicant believes the pending application is in condition for allowance.

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